UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

APR 21 2016

Mr. Don Imm
Field Office Supervisor
U.S. Fish and Wildlife Service
North Georgia Ecological Services Office
105 Westpark Drive Suite D
Athens, Georgia 30606

Dear Mr. Imm:

Consistent with its obligation under Section 7(a)(2) of the Endangered Species Act (ESA), 16 U.S.C. § 1536(a)(2) to insure that any action approved by a federal agency is not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of critical habitat, the United States Environmental Protection Agency, Region 4, would like to request that the United States Fish and Wildlife Service (Service) review the enclosed biological evaluation (BE) for the EPA's approval of revisions to specific provisions of the State of Georgia's Water Quality Standards (WQS), pursuant to Section 303(c) of the Clean Water Act, 33 U.S.C. § 1313(c).

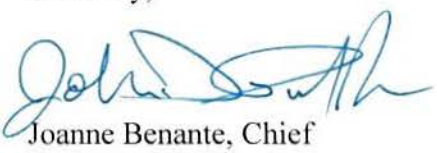
These revisions are described in the enclosed BE, as are the EPA's affect determinations for threatened and endangered species in Georgia. The EPA is submitting this request under the informal consultation provision of the ESA regulations at 50 C.F.R. § 402.13, and has made determinations of "no effect" or "may affect, but not likely to adversely affect" for all aquatic and aquatic-dependent species and their designated critical habitats within the specific waters further detailed within the enclosed BE. On July 22, 2015, Stephen Maurano with the EPA started informal consultation with the Service by emailing Will Duncan Georgia's proposed amendments to their WQS and requesting further consideration. Dr. Anthony Sowers with the Service replaced Mr. Duncan, and a meeting between Dr. Sowers and the EPA took place on February 9, 2016. On February 22, 2016, the EPA sent a "Request for Technical Assistance" letter to Dr. Sowers. By this letter, the EPA is requesting concurrence on those determinations of "may affect, but not likely to adversely affect." Also enclosed for your information is a copy of the draft decision document that provides more detail of each change to standards and the EPA's rationale for approval.

The EPA's research to prepare the BE was structured to support a discussion of the potential effects of the actions on listed species or their designated critical habitat, including primary constituent elements, based upon the best available scientific and commercial data and information. The EPA conferred with Dr. Sowers on February 9, 2016, via a teleconference, discussing each of the six WQS revisions for Georgia's 2013 triennial review. Dr. Sowers and the EPA came to agreement on the consultation approach for each change. This consultation, along with the analysis of the Service's Information, Planning, and Conservation System (IPaC) and the North Georgia Ecological Services Office website, provided the EPA with the basis for the determinations and likely impacts to listed species and designated critical habitat.

The Memorandum of Agreement signed by the Service and the EPA regarding enhanced coordination under the CWA and Endangered Species Act, provision V.B.6., requests that the EPA notify the Service in writing when it makes "may affect, but not likely to adversely affect" determinations. See 66 Fed. Reg. 11,202, 11,210 (Feb. 22, 2001). Additionally, the Service will respond in writing within 30 days of receipt of such a determination, unless extended by mutual agreement. Id. The response will state whether the Service concurs or does not concur. Id. If the Service does not concur, it will provide a written explanation that includes the species and/or habitat of concern, the perceived adverse effects, supporting information and a basic rationale. Id.

Please contact Mr. Jason Poe at (404) 562-9827 or poe.jason@epa.gov or Cecelia Harper, ESA Coordinator, at (404) 562-9418 or harper.cecelia@epa.gov, should you have questions regarding the enclosed BE.

Sincerely,



Joanne Benante, Chief
for Water Quality Planning Branch

Enclosure

cc: Anthony Sowers, FWS, Townsend, GA (electronically)
Jerry Ziewitz, FWS, Tallahassee, FL (electronically)
Leopoldo Miranda, FWS, Atlanta, GA (electronically)
Pete Pattavina, FWS, Athens, GA (electronically)

Decision Document of the United States Environmental Protection Agency Review of Amendments to Georgia's Water Quality Regulations at Chapters 391-3-6-.03 and 391-3-6-.06 under § 303(c) of the Clean Water Act

This document summarizes the EPA review of the revisions to Water Quality Regulations at Chapters 391-3-6-.03 and 391-3-6-.06 adopted by the State of Georgia. These revisions were adopted as a result of Georgia's water quality standards rulemaking. The state submitted the water quality standards (WQS) revisions by letter dated March 22, 2016, from James A. Capp, Georgia Environmental Protection Division, Watershed Protection Branch Chief, to James D. Giattina, Director, Water Protection Division, Environmental Protection Agency, Region 4. The EPA received the revisions on March 29, 2016. The submittal to the EPA was accompanied by certification from Samuel Olens, Georgia Attorney General, dated February 23, 2016, that the standards revisions were duly adopted pursuant to the state law of Georgia. The public comment period for the rulemaking began on May 8, 2015, and ended on June 26, 2015, and a public hearing was held on June 26, 2015. In response to the public comments received, the state prepared a Response to Comments dated August 6, 2015. The revisions were adopted by the Board of Natural Resources on August 26, 2015, and became effective October 22, 2015.

Additions to the State's WQS regulations are shown underlined below, while deletions to the regulations are shown with strikethrough. As discussed more fully below, where the EPA has determined that the State's rule revisions are themselves new or revised WQS, the EPA has reviewed and acted on these revisions pursuant to Section 303(c) of the Clean Water Act (CWA).[1] Section 303 of the CWA, 33 U.S.C. § 1313, requires states to establish WQS and to submit any new or revised standards to the EPA for review and approval or disapproval. The EPA's implementing regulations require states to adopt water quality criteria that protect the designated use. See 40 C.F.R. §131.11(a). Such criteria must be based on a sound scientific rationale, and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use. In addition, the EPA's regulations require that in establishing criteria, a state shall consider WQS of downstream waters and shall ensure that its WQS provide for the attainment and maintenance of WQS of downstream waters. See 40 C.F.R. § 131.10(b).

A state's submission of water quality criteria must include (1) the methods used and analyses conducted to support WQS revisions, (2) water quality criteria sufficient to protect the designated uses and (3) a certification by the State Attorney General or other appropriate legal authority within the state that the WQS were duly adopted pursuant to state law. See 40 C.F.R. §131.6.

Based on the review of the State's submittal, the EPA has determined that the new and revised standards listed below are consistent with 40 C.F.R. Part 131 and Section 303 of the CWA. Therefore, the EPA is approving the following new and revised WQS:

- Revisions of Rule 391-3-6-.03(2) to designate a section of the Conasauga River as an Outstanding National Resource Water and to describe Tier 3 antidegradation requirements.
- Revisions of Rule 391-3-6-.03(5) to adopt a site specific copper criteria for Buffalo Creek.
- Revisions of Rule 391-3-6-.03(6) to revise bacterial criteria for recreational waters.

[1] The EPA has provided FAQs on "What is a New or Revised Water Quality Standard Under CWA 303(c)(3)?" at http://water.epa.gov/scitech/swguidance/standards/cwa303faq.cfm. The link provides detailed information of such analysis.

- Revisions of Rule 391-3-6-.03(14) to update specific water use classifications of various waterbodies and to remove a footnote referencing the streamflow at which specific criteria apply in the Chattahoochee River from Atlanta (Peachtree Creek) to Cedar Creek.
- Revisions of Rule 391-3-6-.03(17) to clarify the definition of total lake loading of phosphorus.
- Revisions of Rule 391-3-6-.06(4) to remove a variance to the narrative toxicity standard on Cabin Creek.

New and Revised Standards that are Approved by the EPA:

The State adopted the following revisions, which are shown in underline (new provisions) and strikethrough (deleted provisions):

Revisions of Rule 391-3-6-.03(2) to designate a section of the Conasauga River as an Outstanding National Resource Water and to describe Tier 3 antidegradation requirements.

(a) The purposes and intent of the State in establishing WQS are to provide enhancement of water quality and prevention of pollution; to protect the public health or welfare in accordance with the public interest for drinking water supplies, conservation of fish, wildlife and other beneficial aquatic life, and agricultural, industrial, recreational, and other reasonable and necessary uses and to maintain and improve the biological integrity of the waters of the State.

(b)~~(i) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.~~ The following paragraphs describe the three tiers of the State's waters.

(i) Tier 1 - Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

(ii) Tier 2 - Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the division finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the division's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the division shall assure water quality adequate to protect existing uses fully. Further, the division shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

~~(c)~~(iii) Tier 3 - Outstanding National Resource Waters (ONRW). This designation will be considered for an outstanding national resource waters, such as waters of National or State parks and wildlife refuges and waters of exceptional aesthetic, historic, recreational, or ecological significance. For waters designated as ONRW, existing water quality shall be maintained and protected. The following waters below are designated as ONRWs:

Conasauga River within the Cohutta Wilderness Area of the Chattahoochee National Forest (headwaters to Forest Service Road 17).

4. Activities that result in short-term, temporary, and limited changes to water quality may be allowed if authorized by the Division and the water quality is returned or restored to conditions equal to or better than those existing prior to the activities.

The state antidegradation policy is being revised to clarify the three antidegradation Tiers – specifically to include consideration of aesthetic and historic significance attributes when designating Outstanding National Resource Waters (ONRW) and to add language that activities that result in short-term, temporary, and limited changes to water quality may be allowed if authorized by the Division. This is consistent with 40 C.F.R. § 131.12(a)(3), which states that, "Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected." It is also consistent with Water Quality Standards Regulation preamble that, "States may allow some limited activities which result in temporary and short-term changes in water quality…" With this action the State also added the Conasauga River as an ONRW.

The revisions also designate the Conasauga River in the Cohutta Wilderness Area as Georgia's first ONRW. The Conasauga River headwaters were first nominated for ONRW status in 2007 by the Environmental Georgia Research and Policy Center. GAEPD worked with stakeholders to update the 2004 Procedures for Selection of Outstanding National Resource Waters, completing revisions in 2011. On June 22, 2012, the Environmental Georgia Research and Policy Center submitted a complete nomination package which included waterbody characteristics, a mapped delineation, reasons for nomination, a stakeholder inventory, control and enforcement documentation, nominating groups, a cost benefits analysis, documentation of public involvement, landuse/landcover information, and a watershed inventory. The designation applies to an eleven-mile reach of the Conasauga River within the Cohutta Wilderness Area of the Chattahoochee National Forest (headwaters to Forest Service Road 17). The nomination package documents high existing water quality and ecological value, exceptional recreational or aesthetic value, and strong community support for ONRW designation. The designation therefore is consistent with the requirements of 40 C.F.R. § 131.12(a)(3), ensuring the maintenance and protection of the Conasauga's exceptional recreational or ecological significance.

Revisions of Rule 391-3-6-.03(5) to adopt a site specific copper criteria for Buffalo Creek.

(e)(ii) Site-specific Copper criteria developed using the biotic ligand model (BLM):
Buffalo Creek (Richards Lake Dam to confluence with Little Tallapoosa River):

$$\text{Acute criteria} = 4.9X10^{8} \; e^{\left(-0.5\left(\left(\frac{(\ln(pH)-2.316)}{-0.1816}\right)^{2}+\left(\frac{\ln(DOC)-32.18}{-5.453}\right)^{2}\right)\right)}$$

$$\text{Chronic criteria} = 3.043X10^{8} \; e^{\left(-0.5\left(\left(\frac{(\ln(pH)-2.316)}{-0.1816}\right)^{2}+\left(\frac{\ln(DOC)-32.18}{-5.453}\right)^{2}\right)\right)}$$

The State revision of copper criteria adds site-specific criteria for Buffalo Creek, from Richards Lake Dam to confluence with Little Tallapoosa River. The criteria were developed using the Biotic Ligand Model (BLM) to determine metal toxicity correcting for bioavailability based on waterbody chemistry. Acute and chronic criteria were developed to protect against immediate effects, such as mortality, and long term effects, such as reproduction, growth and survival. The BLM uses ten water chemistry parameters to calculate a freshwater copper criterion, but studies indicated that the bioavailability of copper in Buffalo Creek is primarily dependent on the instream pH and Dissolved Organic Carbon (DOC), so the site-specific copper criteria are expressed as equations based on instream pH and DOC concentrations. The criteria were developed following EPA's Aquatic Life Ambient Freshwater Quality

Criteria for Copper, February 2007 (EPA-822-R-07-001), are protective of the designated uses for this stream segment and are consistent with the CWA and 40 C.F.R. Part 131.

Revisions of Rule 391-3-6-.03(6) to revise bacterial criteria for recreational waters.

(a)(i) Bacteria: For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200/100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300 per 100 mL in lakes and reservoirs and 500 per 100 mL in free flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours and not to exceed a maximum of 4,000 per 100 mL for any sample. The State does not encourage swimming in these surface waters since a number of factors which are beyond the control of any State regulatory agency contribute to elevated levels of fecal ~~coliform~~bacteria.

(b)(i) Bacteria: ~~Fecal coliform not to exceed the following geometric means based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours:~~

1. Coastal waters ~~100 per 100 mL:~~ Culturable enterococci not to exceed a geometric mean of 35 CFU (colony forming units) per 100 mL. The geometric mean duration shall not be greater than 30 days. There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of 130 CFU per 100 mL in the same 30-day interval.

2. All other recreational waters ~~200 per 100 mL:~~ Culturable E. coli not to exceed a geometric mean of 126 CFU (colony forming units) per 100 mL. The geometric mean duration shall not be greater than 30 days. There shall be no greater than a ten percent excursion frequency of an E. coli statistical threshold value (STV) of 410 CFU per 100 mL in the same 30-day interval.

~~3. Should water quality and sanitary studies show natural fecal coliform levels exceed 200/100 mL (geometric mean) occasionally in high quality recreational waters, then the allowable geometric mean fecal coliform level shall not exceed 300 per 100 mL in lakes and reservoirs and 500 per 100 mL in free flowing fresh water streams~~

(c)(iii) Bacteria: 1. For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200/100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300 per 100 mL in lakes and reservoirs and 500 per 100 mL in free flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours and not to exceed a maximum of 4,000 per 100 mL for any sample. The State does not encourage swimming in these surface waters since a number of factors which are beyond

the control of any State regulatory agency contribute to elevated levels of ~~fecal coliform~~bacteria.

The State revisions adopt bacteria criteria for waters designated as Recreation, based on EPA's 2012 Recreational Bacteria Criteria recommendations. Epidemiological studies determined that E. coli and enterococci are better indicators of gastrointestinal illness than fecal coliform. The criteria were adopted corresponding with EPA's Recreational Water Quality Criteria, November 2012, (EPA-820-F-12-058), are protective of the recreational use and are consistent with the CWA and 40 C.F.R. Part 131.

The State revised Rule 391-3-6-.03(14) to update specific water use classifications of various waterbodies and to remove a footnote referencing the streamflow at which specific criteria apply in the Chattahoochee River from Atlanta (Peachtree Creek) to Cedar Creek.

All littoral waters on the ocean side of ~~St. Simons,~~ Sea~~,~~ and Sapelo Islands, and on the ocean and sound side of St. Simons Island		Recreation
Buttermilk Sound	Reimolds Pasture	Recreation
Chattahoochee River	Atlanta (Peachtree Creek) to Cedar Creek	Fishing[+]
Headwaters of Unnamed Tributary to Bethlehem Creek	Bethlehem Creek to Lake Franklin, F.D. Roosevelt State Park Beaches	Recreation
Little Kolomoki Creek	Lake Kolomoki, Kolomoki Mounds State Park Beach	Recreation
Smith Creek	Unicoi Lake, Unicoi State Park Beach	Recreation
Headwaters of Gold Mine Branch	Fort Mountain Lake, Fort Mountain State Park Beach	Recreation
Tributaries to Heath Creek	Rocky Mountain Public Fishing Lakes, Rocky Mountain Public Fishing Area	Recreation
Flint River	Georgia Hwy. 27 to Georgia Power Dam at Lake Worth, Albany including Lakes Blackshear, Chehaw, and Worth	Recreation

Little River	Reed Bingham State Park Lake, Reed Bingham State Park Lake Beach	Recreation
Big Sandy Creek	Chief McIntosh Lake, Indian Springs State Park Beaches	Recreation
Headwaters of Little Ocmulgee River	Little Ocmulgee Lake, Little Ocmulgee State Park Beach	Recreation
Towaliga River	High Falls Lake, High Falls State Park Beaches	Recreation
Hard Labor Creek	Lake Rutledge, Hard Labor Creek State Park Beaches	Recreation
Marbury Creek	Fort Yargo Lake, Fort Yargo State Park Beaches	Recreation
Julienton River	Contentment Bluff Sandbar and Dallas Bluff Sandbar	Recreation
Skidaway River	Skidaway Narrows in Chatham County	Recreation
All littoral waters on the ocean side of Cumberland ~~and Jekyll~~ Islands~~s~~		Recreation
All littoral waters on the ocean and sound side of Jekyll Island		Recreation
South Brunswick River	Blythe Island Sandbar	Recreation
Unnamed Tributary to Lick Creek	Lake Liberty, A.H. Stephens State Park Beach	Recreation
Big Creek	Lake Laura S. Walker, Laura Walker State Park Beach	Recreation
Wolf Creek	Lake Trahlyta, Vogel State Park Beach	Recreation

The State's action to add the Recreation use to these segments recognizes current use of these waters for general recreational activities, such as water skiing, boating, and swimming. Due to the provisions of 391-3-6-.03(6)(b) that uses for the Recreation use include "[g]eneral recreational activities such as water skiing, boating, and swimming, or for any other use requiring water of a lower water quality", the

assignment of the Recreation use also incorporates protective criteria for the aquatic life uses of the Fishing use. Therefore, the assignment of the Recreation use for these segments provides for the protection of the CWA Section 101(a) use goals and is consistent with 40 C.F.R. Part 131.

The State revisions also remove the footnote to Specific Water Use Classifications at 391-3-6-.03(14) for the Chattahoochee River Atlanta (Peachtree Creek) to Cedar Creek, which states that, "Specific criteria apply at all times when the river flow measured at a point immediately upstream from Peachtree Creek equals or exceeds 750 [cubic feet per second (cfs)] (Atlanta gage flow minus Atlanta water supply withdrawal)." The use classification and footnote were approved by the EPA on August 18, 1975, to upgrade the use classification and associated water quality criteria from Industrial to Fishing. At that time, the State could not ensure that WQS could be met below that value. With the removal of this footnote, the State WQS, including but not limited to all narrative and numeric criteria, apply at all flows at all times on the River. The removal of this footnote ensures the protection of the designated use of the segment at all flows and is consistent with the CWA and 40 C.F.R. Part 131.

Revisions of Rule 391-3-6-.03(17) to clarify the definition of total lake loading of phosphorus.

(17)(a)(iv) Total Phosphorous: Total lake loading shall not exceed 2.4 pounds per acre foot of lake volume per year.
(v) ~~Fecal Coliform~~ Bacteria:
1. U.S. 27 at Franklin to New River: Fecal coliform bacteria shall not exceed the Fishing criterion as presented in 391-3-6-.03(6)(c)(iii).
2. New River to West Point Dam: ~~Fecal coliform bacteria~~E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(17)(b)(iv) Total Phosphorous: Total lake loading shall not exceed 2.4 pounds per acre-foot of lake volume per year.
(v) ~~Fecal Coliform~~Bacteria:
1. Georgia Highway 39 to Cowikee Creek: Fecal coliform bacteria shall not exceed the Fishing criterion as presented in 391-3-6-.03(6)(c)(iii).
2. Cowikee Creek to Walter F. George Dam: ~~Fecal coliform bacteria~~E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(17)(c)(iv) Total Phosphorous: Total lake loading shall not exceed 5.5 pounds per acre-foot of lake volume per year.
(v) ~~Fecal Coliform~~Bacteria: ~~Fecal coliform bacteria~~E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(17)(d)(iv) Total Phosphorous: Total lake loading shall not exceed 1.3 pounds per acre-foot of lake volume per year.
(v) ~~Fecal Coliform~~Bacteria:
1. Etowah River, State Highway 5 to State Highway 20: Fecal coliform bacteria shall not exceed the Fishing Criterion as presented in 391-3-6.--.03(6)(c)(iii).
2. Etowah River, State Highway 20 to Allatoona Dam: ~~Fecal coliform bacteria~~E. coli shall not exceed the Recreation criterion as presented in 391-3-6.--.03(6)(b)(i).

(17)(e)(iv) Total Phosphorous: Total lake loading shall not exceed 0.25 pounds per acre-foot of lake volume per year.
(v) ~~Fecal Coliform~~Bacteria: ~~Fecal coliform bacteria~~E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(17)(f)(iv) Total Phosphorous: Total lake loading shall not exceed 172,500 pounds or 0.46 pounds per acre-foot of lake volume per year.
(v) ~~Fecal Coliform~~Bacteria: ~~Fecal coliform bacteria~~E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

The State action clarifies that loadings are of total phosphorus (versus elemental or other forms of phosphorus) and updates the bacterial indicator based on the revised bacteria criteria. These revisions ensure clarity and consistency in the standards and are consistent with the CWA and 40 C.F.R. Part 131.

Revisions of Rule 391-3-6-.06(4) to remove a variance to the narrative toxicity standard on Cabin Creek.

391-3-6-.06(4)(d)(5)(v)(d)(vii) Permits issued or reissued after the adoption of this paragraph may include site specific temporary exceptions to the applicable WQS under Chapter 391-3-6-.03(5)(e) when the requirements of this paragraph are met and the temporary exception is specifically authorized herein. Where a discharger cannot meet applicable limits for whole effluent toxicity because of a water quality based whole effluent toxicity criteria, site-specific temporary exceptions may be allowed on effluent dominated receiving streams under 7-day, 10-year minimum stream flow (7Q10) conditions provided that it has been demonstrated that the permitted discharge will comply with all chemical specific and other applicable water quality criteria, that the receiving stream will support a balanced indigenous population of aquatic life, and that controls more stringent than those required by Section 301(b) and 306 of the Federal Act for achieving whole effluent toxicity criteria would result in substantial and widespread adverse economic and social impacts to the affected communities. These site-specific exceptions shall be applicable only to the wastewater discharge as permitted at the time the exception is authorized with no changes in process or wastewater characteristics that would adversely affect water quality in the receiving stream or adversely affect the ability of potential new pollution abatement technologies to attain compliance with the whole effluent toxicity criteria. These site-specific exceptions shall be reviewed consistent with 40 CFR 131.20 at least once in every 3- year period. If it is determined that feasible new pollution abatement technologies or alternatives have become available to allow compliance with whole effluent toxicity criteria, these site-specific exceptions may be revoked and the NPDES permits modified to require implementation of such pollution abatement technologies or alternatives as soon as reasonably practicable. Along with this permit modification will be a requirement for the permittee to comply with the water quality based whole effluent toxicity criteria after installation of these technologies. ~~The following discharges and stream segments are hereby granted temporary exception from water quality standards for water quality based whole effluent toxicity criteria: Springs Industries Griffin Finishing Plant, NPDES Permit No. GA0003409, discharge to Cabin Creek in the Ocmulgee River Basin in Spalding County from the point of discharge downstream to Walkers Mill Road.~~

The State action removes a temporary exception from WQS for whole effluent toxicity criteria for the discharge to Cabin Creek in the Ocmulgee River Basin in Spalding County. This variance was adopted by Georgia in April 2000, and approved by the EPA in January 2002 for the Spring Industries Griffin Finishing Plant discharge downstream to the Walkers Mill Road crossing in Cabin Creek in the Ocmulgee River Basin. The facility closed in December 2009 and the temporary exception from WQS is no longer needed. Its removal reinstates all criteria for this stream segment and is consistent with the CWA and 40 C.F.R. Part 131.

Review of Non-substantive Revisions to Water Quality Standards

The EPA determined that the changes within Rule 391-3-6-.03 listed below are editorial, non-substantive changes to Georgia's EPA-approved WQS or are not new or revised WQS. The EPA approves the editorial, non-substantive changes as being consistent with the CWA and the EPA's implementing regulations. The EPA notes, however, that its approvals of these editorial, non-substantive changes do not re-open the EPA's prior approvals of the underlying substantive WQS.

391-3-6-.03 "Water Use Classifications and Water Quality Standards.~~*~~"
~~*Applicable to Intrastate and Interstate Waters of Georgia.~~

(3)(i) "Naturally variable parameters." It is recognized that certain parameters including dissolved oxygen, pH, bacteria, turbidity and water temperature, vary through a given period of time (such as daily or seasonally) due to natural conditions. Assessment of State waters may allow for a 10% excursion frequency for these parameters.
This change addresses a water quality assessment process and is not a new or revised WQS.

(3)(m) "Significant Figures." The number of "~~S~~significant ~~F~~figures" represented in numeric criteria are the number of figures or digits that have meaning as estimated from the accuracy and precision with which the quantity was measured and the data were rounded off.
This change addresses a data quality issue and is not a new or revised water quality standard.

(5)(e)(i) 3. 2,4,5-Trichlorophenoxy propionic acid (TP Silvex) 50 µg/L ~~(TP Silvex)~~

(5)(e)(ii) [4] This pollutant is addressed in 391-3-6-.06. ~~[4] This pollutant is addressed in 391-3-6-.06.~~

Nickel
acute criteria = $(e^{(0.8460[\ln(\text{hardness})] + 2.255)})(0.998)$ µg/L
chronic criteria = $(e^{(0.8460[\ln(\text{hardness})] + 0.0584)})(0.997)$ µg/L

(5)(e)(iv)
11. Benzo(a)Pyrene (CAS RN[1] 50328) 0.018 µg/L
43. 3,3'-Dichlorobenzidine (CAS RN[1] 91941) 0.028 µg/L

(6)(i) Dissolved Oxygen ~~(D.O.)~~:

(7) Natural Water Quality. It is recognized that certain natural waters of the State may have a quality that will not be within the general or specific requirements contained herein. These circumstances do not constitute violations of WQS. This is especially the case for the criteria for dissolved oxygen, temperature, pH and ~~fecal coliform~~bacteria. NPDES permits and best management practices will be the primary mechanisms for ensuring that discharges will not create a harmful situation.

(12) ~~Fecal Coliform~~Bacteria Criteria. The criteria for ~~fecal coliform~~ bacteria provide the regulatory framework to support the USEPA requirement that States protect all waters for ~~the use of primary contact~~ recreational use ~~or swimming~~. The bacterial indicators for primary contact recreational waters are E. coli and enterococci. The bacterial indicator for secondary contact recreational waters is fecal coliform. ~~This is a worthy national goal, although potentially unrealistic with the current indicator organism, fecal coliform bacteria, in use today. To assure that waters are safe for swimming indicates a need to test waters for pathogenic bacteria. However, analyses for pathogenic bacteria are expensive and results are generally difficult to reproduce quantitatively. Also, to ensure the water is safe for swimming would require a whole suite of tests be done for organisms such as Salmonella, Shigella, Vibrio, etc. as the presence/absence of one organism would not document the presence/absence of another. This type of testing program is not possible due to resource constraints. The environmental community in the United States has based the assessment of the bacteriological quality of water on testing for pathogenic indicator organisms, principally on the coliform group. The assessment of streams, rivers, lakes, and estuaries in Georgia and other States is based on fecal coliform organisms.~~
(a) Fecal c~~C~~oliform, E. coli and enterococci bacteria live in the intestinal tract of warm blooded animals including man. These organisms are excreted in extremely high numbers~~, averaging about 1.5 billion coliform per ounce of human feces~~. Pathogenic bacteria also originate in the fecal material of diseased persons. Therefore, waters with high levels of ~~fecal coliform~~ bacteria represent potential problem areas for swimming. Scientific studies indicate there is a positive correlation between E. coli and enterococci counts and gastrointestional illness. However, there is no positive scientific evidence correlating elevated fecal coliform counts with transmission of enteric diseases. In addition, these bacteria can originate from any warm blooded animal or from the soil.
(b) Monitoring programs have documented ~~fecal coliform~~bacterial levels in excess of the criteria in many streams and rivers in urban areas, agricultural areas, and even in areas not extensively impacted by man such as national forest areas. This is not a unique situation to Georgia as similar levels of fecal coliform bacteria have been documented in streams across the nation. ~~The problem appears to lie in the lack of an organism which specifically indicates the presence of human waste materials which can be correlated to human illness. Other organisms such as the Enterococci group and E. coli have been suggested by the USEPA as indicator organisms. However, testing using these organisms by States and the USEPA has indicated similar problems with these indicator organisms.~~
~~(c) The Environmental Protection Division will continue to conduct monitoring to evaluate the use of E. coli and Enterococci as indicators of bacteriological quality in Georgia. The Environmental Protection Division will also conduct studies to determine if a better human specific indicator can be found to replace current indicator organisms.~~

Endangered Species Act:

The EPA's action to approve new and revised standards is subject to completion of consultation under Section 7(a)(2) of the Endangered Species Act (ESA), 16 U.S.C. § 1536(a)(2). Based on review of available information, the EPA has determined that the Agency has "no discretion" in the approval of the revisions to the water quality criterion for revisions of Rule 391-3-6-.03(6) to revise bacterial criteria for recreational waters under ESA Section 7 based on the fact that the criterion are established for the protection of human health as an endpoint. Also, the EPA determined that the Agency has "no discretion" in the designation of the Conasauga River as an Outstanding National Resource Water and the revision of the State's antidegradation policy clarifying the three antidegradation tiers because the EPA is not authorized to require anything more than the requirements listed in 40 CFR §131.12. The EPA prepared a Biological Evaluation (BE) in support of the Agency's approval of the new and revised water quality standards provisions, and this BE was provided to the U.S. Fish and Wildlife Service (FWS). In the BE, the EPA did note the presence of several federally-listed threatened and endangered species and designated critical habitat in the areas under consideration. The EPA determined the following revision was "may affect, not likely to adversely affect" federally listed species: to adopt a site specific copper criteria for Buffalo Creek. The EPA determined the following revisions would have "no effect" on federally-listed species: to update specific water use classifications of various waterbodies, to remove a footnote referencing the streamflow at which specific criteria apply in the Chattahoochee River from Atlanta (Peachtree Creek) to Cedar Creek, to clarify the definition of total lake loading of phosphorus, and to remove a variance to the narrative toxicity standard on Cabin Creek. In a letter dated _____, Donald Imm, Field Supervisor of Georgia Ecological Services, FWS, concurred with the EPA's determination that the WQS revisions were either "may affect, not likely to adversely affect" federally-listed species or would have "no effect" on federally-listed species.

Conclusion

Based on the reasons outlined above, the EPA concludes that the requirements of the CWA and 40 CFR §131 have been met for the new or revised WQS. The EPA approves the revised standards addressed in this Decision Document pursuant to Section 303(c) of the CWA.

Endangered Species Act Section 7(a)(2) Biological Evaluation for the U.S. EPA Region 4's Approval of Georgia's 2013 Triennial Review of its Water Quality Standards April 2016

Description of Federal Action:

Under Section 303(c) of the Clean Water Act (CWA), 33 U.S.C. § 1313(c), and 40 C.F.R. § 131, states and authorized tribes have primary responsibility to develop and adopt water quality standards (WQS) to protect their waters. As required by Section 303(c) of the CWA and 40 C.F.R. § 131, the U.S. Environmental Protection Agency reviews new and revised WQS that have been adopted by states and authorized tribes. State and tribal WQS are not considered effective under the CWA until approved by the EPA. See 65 Fed. Reg. 24,641 (Apr. 27, 2000).

The Federal action being evaluated is the EPA's approval of several revised WQS rule provisions as they relate to the protection of aquatic life use as set forth in Georgia Environmental Protection Division (GAEPD) Rules 391-3-6.03 and 391-3-6.06.

Section 303(c)(3) of the CWA states, in relevant part:

If the Administrator, within sixty days after the date of submission of the revised or new standard, determines that such standard meets the requirements of this Act, such standard shall thereafter be the WQS for the applicable waters of the State.

A. History of ESA Consultation for this CWA Action

Section 7(a)(2) of the Endangered Species Act (ESA) requires the EPA, in consultation with the U.S. Fish and Wildlife Service (FWS) and/or the National Marine Fisheries Service (NMFS), to ensure that any action authorized by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat for such species. As provided in the Memorandum of Agreement between the EPA, the FWS, and the NMFS regarding enhanced coordination of CWA and ESA obligations, the EPA uses a biological evaluation (BE) to analyze whether a new or revised WQS may affect Federally-listed species or designated critical habitat. See 66 Fed. Reg. 11,202 (Feb. 22, 2001).

This BE has been prepared to determine whether the EPA's approval of specific aspects of revisions to Georgia's WQS may affect federally listed endangered or threatened species or designated critical habitat of such species. If the EPA determines that approval may affect listed species or critical habitat but is not likely to adversely affect listed species or habitat, then formal consultation with the FWS is not required if the EPA obtains concurrence on the "not likely to adversely affect" (NLAA) finding from the FWS.

Informal consultation began on July 22, 2015 with an email from Stephen Maurano of the EPA to the Will Duncan of the FWS. The email contained Georgia's proposed revisions to its WQS and requesting further consideration. Dr. Anthony Sowers with the FWS replaced Mr. Duncan, and a meeting between Dr. Sowers and the EPA took place on February 9, 2016. On February 22, 2016, the EPA sent a "Request for Technical Assistance" letter to Dr. Sowers.

On March 9, 2016, Dr. Sowers sent an email (Appendix A) to the EPA describing all of the listed species and critical habitat found in the areas impacted by the revisions to Georgia's WQS. On March 14, 2016, Jason Poe with the EPA spoke to Dr. Sowers, and Dr. Sowers explained that there were more designated critical habitat and listed species, especially on the Conasauga River, but he did not think that they had to be studied extensively because the action the State in taking regarding the Conasauga River is more protective with the ONRW designation.

B. Overview of Water Quality Standards

The purpose of the CWA, as stated in 33 U.S.C. § 1251(a), is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Consistent with the CWA, as part of their WQS, states must designate the uses for which their waters are to be protected, such as fishing and swimming, and identify water quality criteria to protect the uses for pollutants that could reasonably be expected to interfere with the designated uses. In addition, states' WQS must include an antidegradation policy and implementation procedures that are consistent with the EPA's policy to protect existing uses, high quality waters, and water quality in waters identified by the state as outstanding national resource waters. Id. § 1313(c)(2)(A); 40 C.F.R. § 131. Under Section 303 of the CWA, states must submit new and revised WQS to the EPA for review and approval. When a state submits its WQS to EPA for review, the standards must include: (1) the designated uses for each body of water; (2) what methods were used and analyses conducted to support the revisions to state WQS; (3) water quality criteria, which protect the designated uses for each water body and which may be expressed as either a narrative standard or a numeric concentration level; and (4) an antidegradation policy to protect existing uses of bodies of water and high-quality waters. 40 C.F.R. §§ 131.3(i), 131.3, 131.6, 131.12.

C. Description of Specific Georgia Provisions to be Approved by the EPA

GAEPD adopted, and then submitted, new, and revised WQS to the EPA Region 4, by letter dated March 22, 2016. The federal action that is the subject of this BE is the EPA's CWA Section 303(c) proposed approval of Georgia's new and/or revised WQS, *Rules Certification – Triennial Review Chapter 391-3-6., Water Quality Control Rules 391-3-6-.03 and 391-3-6-.06* of which the full text is included in Appendix B, and summarized in the table below.

Revised Criterion/Criteria	State of Georgia Rule Citation
Revisions of Rule 391-3-6-.03(2) to designate a section of the Conasauga River as an Outstanding National Resource Water (ONRW) and to describe Tier 3 antidegradation requirements	391-3-6-.03(2)
Revisions of Rule 391-3-6-.03(5) to adopt a site specific copper criteria for Buffalo Creek	391-3-6-.03(5)
Revisions of Rule 391-3-6-.03(6) to revise bacterial criteria for recreational waters	391-3-6-.03(6)
Revisions of Rule 391-3-6-.03(14) to update specific water use classifications of various waterbodies and to remove a footnote referencing the streamflow at which specific criteria apply in the Chattahoochee River from Atlanta (Peachtree Creek) to Cedar Creek	391-3-6-.03(14)
Revisions of Rule 391-3-6-.03(17) to clarify the definition of total lake loading of phosphorus	391-3-6-.03(17)
Revisions of Rule 391-3-6-.06(4) to remove a variance to the narrative toxicity standard on Cabin Creek	391-3-6-.06(4)

Action Area:

A detailed description of the action area that each site specific water quality criteria apply to, are described in the analysis for each water quality standard revision below.

Effects of the Action on Species of Interest for ESA Consultation:

1. **Designation of a Section of the Conasauga River as an Outstanding National Resource Water (ONRW)**

   The EPA lacks authority to require more than the requirements listed in the Clean Water Act's antidegradation regulation found in 40 C.F.R. § 131.12[1], and therefore has no discretion to revise an otherwise approvable action to benefit listed species where the State submittal meets the requirements of 40 C.F.R. § 131.12.

[1] **(a)** The State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:
(1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
(2) Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.
(3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.
(4) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act.

2. Site Specific Copper Criteria at Buffalo Creek Using the Biotic Ligand Model

The criteria were developed using the *Aquatic Life Ambient Freshwater Quality Criteria – Copper* (EPA-822-R-07-001, February 2007) Biotic Ligand Model (BLM)[2], to determine metal toxicity correcting for bioavailability based on waterbody chemistry. The BLM uses ten water chemistry parameters to calculate a freshwater copper criterion, but studies indicated that the bioavailability of copper in Buffalo Creek is primarily dependent on the instream pH and Dissolved Organic Carbon (DOC), so the site-specific copper criteria are expressed as equations based on these parameters.

A. Description of the Federally Listed Species and Critical Habitat

The species and critical habitat information associated with the site specific copper criteria action area was compiled from county-based information found on the North Georgia Ecological Services Office website at http://www.fws.gov/athens/endangered.html and the U.S. Fish and Wildlife Service Information, Planning and Conservation System (IPaC). The Georgia Ecological Services, Coastal Georgia Sub Office provided a species/critical habitat list for critical habitat and consultation areas. This information can be found in Appendix A of this BE.

The State revisions to the copper criteria add site-specific criteria for Buffalo Creek, from Richards Lake Dam to confluence with Little Tallapoosa River in Carroll County along the western border of Georgia. A map of the affected area is included in Appendix C. According to information provided by Dr. Sowers, the finelined pocketbook (*Lampsilis altilis*) mussel inhabits the waters downstream of the action area. Also, the Indiana Bat (*Myotis sodalist*), Gray Bat (*Myotis grisescens*) and Northern Long-eared Bat (*Myotis septentrionalis*) may use the riparian areas for foraging.

Finelined pocketbook mussel (*Lampsilis altilis*)

The finelined pocketbook was listed as a threatened species on March 17, 1993. See 58 Fed. Reg. 14,330.

The fine-lined pocketbook was historically reported from the Tombigbee, Black Warrior, Cahaba, Alabama, Tallapoosa, and Coosa Rivers and many of their tributaries in Alabama, Georgia, Mississippi, and Tennessee (NatureServe. 2016). The species has apparently disappeared from the Tombigbee and Alabama River drainages, and possibly from the Black Warrior River drainage. Currently, the species can be found in Alabama and Georgia (Nature Serve. 2016).

Tributary populations of fine-lined pocketbook are generally characterized as small, localized, and with low densities. The low numbers of individuals at most sites suggest marginal habitat conditions. All drainage populations remain susceptible to stochastic and chronic events (e.g., spills, drought and/or landuse runoff). Populations may be limited or declining due to agriculture and mining operations (Gangloff 2003).

[2] Information on the BLM can be found by visiting https://www.epa.gov/wqs-tech/copper-biotic-ligand-model

Indiana Bat (*Myotis sodalist*)
The Indiana Bat was listed as an endangered species on March 11, 1967, and is currently listed as endangered under the Endangered Species Act of 1973, as amended. The majority of the population hibernates at relatively few sites, including several caves and one mine in Missouri, southern Indiana, and Kentucky (Brady et al. 1983, USFWS 1999).

A significant threat to the Indiana Bat is human disturbance at winter caves, which causes aroused bats to deplete energy reserves (Twente 1955, Mohr 1972, Engel et al. 1976). Vandalism and indiscriminant killing have been a problem at some caves. Commercialization of cave results in excessive disturbance (Mohr 1972) or intentional elimination by cave owners (Hall 1962). Other threats include exclusion of bats by poorly designed gates (Long's Cave in Mammoth Cave National Park, Kentucky), changes in cave temperatures induced by opening additional entrances (Matthews and Moseley 1990) or poorly designed barriers to human access (Richter et al. 1993). Improperly constructed gates can alter the air flow, trap debris, and block the entrance by not allowing enough flight space (Brady et al. 1982). Altered exchange of air with the outside environment can cause significant changes in cave temperature and humidity and may cause the bats to abandon the cave (Tuttle 1977). Despite protection at overwintering sites, populations continue to decrease in several portions of their range, suggesting that the species is being negatively affected by disturbance or loss of summer habitat. Loss and degradation of summer habitat and roost sites due to impoundment, stream channelization, housing development, clear cutting for agricultural use (Herkert 1992), or incompatible forest management practices that result in a shortage of the microhabitats used for maternity roosts may be the primary factors in recent population declines (Sparks et al. 2005).

Flying insects are the typical prey items; diet reflects prey present in available foraging habitat. The bat forages along river and lake shorelines, in the crowns of trees in floodplains (Humphrey et al. 1977), and in upland forest (Brack and LaVal 1985). The most significant range wide threats to the Indiana bat have been habitat loss/degradation, forest fragmentation, winter disturbance, and environmental contaminants. In addition to these threats, climate change and white-nose syndrome are increasingly being identified as significant threats to the future recovery of the Indiana Bat and its congeners (Indiana Bat 5-Year Review: Summary and Evaluation 2009).

Gray Bat (*Myotis grisescens*)
The Gray Bat was listed as endangered on April 28, 1976. See 41 Fed. Reg. 17,736, 17740. The range extends from southeastern Kansas and central Oklahoma east to western Virginia and western North Carolina, and from Missouri, Illinois, and Indiana south to southern Alabama and northwestern Florida and occurs primarily in the cave region of Missouri, Arkansas, Kentucky, Tennessee, and Alabama. Summer and winter ranges are essentially the same. (Decher and Choate 1995).
These bats forage parallel to streams (Caire et al. 1989) and are adapted to forest foraging. The energy demands on adult females are tremendous during lactation, and individual females sometimes feed continuously for seven or more hours per night (Tuttle and Stevenson, 1977).

Pesticides represent a major threat to the Gray Bat (Clark et al. 1978, 1980, 1982) and bats consume moths with dieldrin. Juvenile bats receive concentrated amounts through the female's milk. The rapid fat utilization in juveniles because of the stress of flight initiation

can cause fatal concentrations in brain tissues (Clark et al. 1978). Dieldrin was banned in 1974, but provisions were made to use existing stocks. Clark et al. (1980) documented deaths in Gray Bats from heptachlor residues reflecting a change by local farmers from aldrin to heptachlor as stocks of aldrin have become depleted.

Destruction of food, foraging habitats, and caves is also a concern for the Gray Bat. Mayfly larvae are susceptible to aquatic pollution, turbidity, and siltation caused by strip mines in the watershed or farming practices (Fremling 1968, Tuttle 1979). Deforestation of the watershed reduces foraging habitat (Tuttle and Stevenson, 1977). Young Gray Bats use the forest near the cave entrance for cover while perfecting flight abilities (Tuttle 1976). Both juveniles and adults use forested areas for protection from predators, specifically screech owls (Tuttle 1979). Impoundment of waterways has submerged important cave sites and made other caves more accessible to humans (Barbour and Davis 1969, Tuttle 1979, Brady et al. 1982).

Natural calamities, such as submersion of the cave during a flood or a natural cave-in, also affect bat populations (Tuttle 1979). Flood frequency and magnitude can be affected by channelization and other human activities. The elimination of colonies that were disrupted or deliberately destroyed when their caves were commercialized or entered repeatedly by explorers, scientists, or vandals has led to their decline (40 Fed. Reg. 17,590, 17,591 (Apr. 21, 1975)). Bats consume insects (*Lepidoptera, Coleoptera,* and *Diptera*) selectively and opportunistically. They take advantage of taxa emergences and also eat a variety of other taxa in smaller quantities (Best et al. 1997).

Northern Long-eared Bat (*Myotis septentrionalis*)

The Northern Long-eared Bat was listed as threatened on April 2, 2015. See 80 Fed. Reg. 17,974. This bat is widely but patchily distributed in the eastern and north central United States and adjacent southern Canada, from Newfoundland and eastern Quebec south through New England and the mountains of Virginia, North Carolina, South Carolina, and Georgia to the north central panhandle of Florida (formerly) and northwestward through Alabama, northern Arkansas, the eastern Great Plains, and the western Canadian provinces, to northeastern British Columbia and southern Northwest Territories (Barbour and Davis 1969, Harvey 1992, van Zyll de Jong 1985, Hall 1981).

The general summer and winter ranges appear to be identical (Barbour and Davis 1969). This species is more common in the northern part of the range than in the south (Harvey 1992), and it is rare in the northwestern portion of the range (Nagorsen and Brigham 1993, Caceres and Barclay 2000). It is reported uncommon in Indiana, Kentucky, Tennessee, and Wisconsin (Mumford and Cope 1964, Harvey 1991, Jackson 1961), more common in northern Michigan than in southern Michigan (Kurta 1982), and quite common in New York (Hamilton and Whitaker 1979).

The most serious threat is white-nose syndrome (WNS), an often (but not always) lethal condition caused by a fungal pathogen (*Geomyces destructans*). WNS was first noticed in 2006 in New York. Since its initial discovery, WNS has spread rapidly and now occurs throughout most of the northeastern United States and adjacent southeastern Canada. WNS affects *Myotis septentrionalis* and several other bat species (Gargas et al. 2009) and resulted in more than a million bat deaths in the northeastern United States in just five years.

Loss, degradation, and fragmentation of mature forest habitat (associated with various kinds of human activities, such as logging; oil, gas, and mineral development; and wind energy development) also may be a significant threat (Center for Biological Diversity 2010, USFWS 011). Mortality caused directly by wind turbines may pose a significant threat in some areas (USFWS 2011).

This species is sensitive to disturbance during hibernation (Thomas 1995). Frequently aroused bats may deplete their energy reserves. Nursery colonies are very sensitive to disturbance by humans; bats may move to an alternate roost after a single examination, even if no attempt is made to capture the bats (Layne 1978).

Populations of this species in New York, Massachusetts, and Vermont declined 93 percent overall in the few years since WNS was first discovered (Langwig et al. 2009). Small, highly fragmented, or young forests that provide limited areas of sub-canopy foraging habitat may not be suitable. Young forests may also lack appropriate nursery sites. A lack of suitable hibernacula may prevent occupancy of areas that otherwise have adequate habitat (Kurta 1982).

The Northern Long-eared Bat is an opportunistic insectivore (Kunz 1973). Prey composition varies widely among sites and seasons and their diet includes *Lepidoptera, Coleoptera, Neuroptera, Diptera, Hymenoptera, Homoptera,* and *Hemiptera* (Whitaker 1972, LaVal and LaVal 1980, Griffith and Gates 1985). The presence of green plant material in some individuals, suggesting that some insects may have been gleaned from vegetation (Fenton 1982).

Foraging typically occurs in forested habitats, above and below the canopy, over forest clearings and occasionally over water. Eleven individuals (ten males, one female) tagged with chemical lights observed during the summer in Missouri (LaVal et al. 1977), foraged almost exclusively among the trees of hillside and ridge forests, rather than utilizing floodplain and riparian forests. Foraging bats doubled back frequently and only slowly moved out of the observation area. In Iowa, Kunz (1973, 1971) found primarily females foraging in mature deciduous uplands with adjacent deep ravines and in a disturbed riparian area with an adjacent floodplain and agricultural lands (NatureServe. 2014).

B. Manner in Which the Action May Affect:

The BLM that was used to derive Georgia's site specific copper criteria is based on EPA's Aquatic Life Ambient Freshwater Quality Criteria for Copper, February 2007 (EPA-822-R-07-001)[3] (hereinafter, "Copper Document") which arose from 350 toxicity tests, including 15 species of invertebrates, providing considerations to the forage activities of the three listed bat species. Acute and chronic criteria were developed to protect against immediate effects to species, such as mortality, and long term effects, such as reproduction, growth and survival. The analysis of these test indicated that the bats listed will be protected from any impacts from the adoption of the BLM in the State's WQS.

[3] "Data from approximately 350 tests were used to derive normalized LC50 values, including 15 species of invertebrates, 22 species of fish, and 1 amphibian species, representing 27 different genera."

The EPA determined that any affect will be "may affect, not likely to adversely affect-discountable" for the three listed, aquatic-dependent[4] bats known to inhabit the areas around Buffalo Creek (Indiana Bat (*Myotis sodalist*), Gray Bat (*Myotis grisescens*) and Northern Long-eared Bat (*Myotis septentrionalis*)), due to the very limited dietary exposure through consumption of prey species and water, the non-bioaccumulative nature of copper, and results from the toxicology data found in EPA's Copper Document.

During an April 12, 2016, call with Pete Pattavina, Biologist with the FWS, North Georgia Ecological Field Office in Athens, Georgia, Mr. Pattavina discussed the proposed "may affect, not likely to adversely affect-discountable" designation for the three bat species being considered with Jason Poe, EPA Region 4. Mr. Pattavina concurred that this was a reasonable designation. Mr. Poe also asked if there was any new research Mr. Pattavina was aware of as it related to the bat species and copper, Mr. Pattavina could not recall any new research. In an email on April 12, 2016 (Appendix D), Mr. Pattavina provided abstracts regarding bats and other contaminants, but those abstracts did not pertain to Georgia's action in this instance. The email also reiterated Mr. Pattavina's initial conclusion of a "may affect, not likely to adversely affect" for the bat species.

As stated above the Copper Document ranked 27 species, including one mussel, according to their freshwater genus mean acute values (GMAV) with species mean acute-chronic ratios. The Final Acute Value (FAV) of 4.67 µ/L was derived from the GMAV with cumulative probabilities closest to the 5th percentile toxicity value for all the tested genera[5]. While *Lampsilis altilis* was not among the 27 species ranked for the GMAV, *Actinonaias pectorosa,* a species under the same family (Lampsilini) was ranked. *Actinonaias pectorosa* received a GMAV score of 11.3 µ/L which puts it well above the 4.67 µ/L which would indicate an organism that is sensitive at the 5th percentile and therefore is represented in the 95% of protected genera. The EPA determined that any effect to the finelined pocketbook mussel located downstream of the action area will be "may effect, not likely to adversely affect – discountable". According to the Endangered Species Consultation Handbook, "discountable effects" are those that are extremely unlikely to occur and, based on best judgment, cannot be meaningfully measured, detected, or evaluated.

3. Revised Bacteria Criteria for Recreational Waters

The revised bacteria criteria for recreational waters are designed to protect human health. The EPA discretion to act on Georgia's submission is limited to determining whether the criteria ensure the protection of designated uses upon which the criteria are based (i.e., recreational water

[4] According to the Draft Framework for Conducting Biological Evaluations of Aquatic Life Criteria Methods Manual, "aquatic dependent species" are not water-breathing organisms, but a meaningful amount of their diet includes aquatic organisms.

[4] "The presumption is that this acute toxicity value represents the LC50 for an organism that is sensitive at the 5th percentile of the GMAV distribution.

used by humans). Therefore, the EPA has no discretion to revise an otherwise approvable health criterion to benefit listed species.

4. Update Specific Water Use Classifications and Removal of the Footnote Referencing the Streamflow at Which Specific Criteria Apply in the Chattahoochee River from Atlanta (Peachtree Creek) to Cedar Creek

The State's action to add the Recreation use to these segments recognizes current use of these waters for general recreational activities. The assignment of the Recreation use also incorporates protective criteria for the aquatic life uses of the fishing use for which the waters were designated prior to this update. The EPA is acting on the recreation use designation which is a designated use protective of human health. Therefore, the EPA has no discretion to revise an otherwise-approvable health criterion to benefit listed species.
The footnote allowed the WQS to be voided when the flow at Peachtree Creek fell below 750 cubic feet per second (cfs). The State removed the footnote referencing the streamflow at which specific criteria apply on the Chattahoochee River from Atlanta (Peachtree Creek) to Cedar Creek ensuring that the site specific criteria (designated use criteria) be met at all times.

According to Georgia Ecological Services, Coastal Georgia Sub Office, there are no listed species on the Chattahoochee between Peachtree Creek and Cedar Creek. The EPA has therefore determined that the removal of the footnote will have "no effect" on listed species or their designated critical habitat.

5. Clarify the Definition of Total Lake Loading of Phosphorus

The State's action clarifies that loadings are of total phosphorus and updates the bacterial indicator used based on the revised bacteria criteria from fecal coliform to E. coli.
For the total lake loading of phosphorus portion of this revision, after conferring with Dr. Sowers, the EPA concluded that this action will have "no effect" on listed species or designated critical habitat.

For the bacterial indicator revision from fecal coliform to E. coli, which is designed to protect human health, the EPA discretion to act on Georgia's submission is limited to determining whether the criteria ensure the protection of designated uses upon which the criteria are based (i.e. recreational water used by humans). Therefore, the EPA has "no discretion" to revise an otherwise approvable health criterion to benefit listed species.

6. Remove a Variance to the Narrative Toxicity Standard on Cabin Creek

The State's action removes a temporary exception from WQS for whole effluent toxicity criteria for the discharge to Cabin Creek in the Ocmulgee River Basin in Spalding County. This variance was adopted by GAEPD in April 2000 and approved by EPA in January 2002 for the Spring

Industries Griffin Finishing Plant discharge downstream to the Walkers Mill Road crossing in Cabin Creek in the Ocmulgee River Basin. The facility closed in December 2009 and the temporary exception from WQS is no longer needed.

The facility has not discharged into Cabin Creek since 2009 and the underlying narrative toxicity standard currently applies to the aforementioned segment of Cabin Creek. The EPA is only acting on the removal of the temporary exception and is not acting on the underlying narrative toxicity standard; therefore, the EPA concludes that this action will have "no effect" on listed species or habitat.

Summary of EPA Determinations:

Three of the standards revisions adopted by GAEPD including: removal of the footnote for flow at Peachtree Creek, clarifying the definition of total lake loading of phosphorus, and the removal of the variance on Cabin Creek - have "no effect" on listed species or designated critical habitat. For three of the standards revisions adopted by GAEPD including: the revision of the bacteria criteria for recreational waters, updating specific water use classifications, and revisions to the antidegradation provisions including the designation of the Conasauga River as an ORNW, the EPA has "no discretion" to consult under ESA Section 7(a)(2). Finally, the EPA determined that the site specific copper criteria using the BLM "may affect, but is not likely to adversely affect-discountable", for the aquatic dependent, finelined pocketbook mussel (*Lampsilis altilis*), and the aquatic- dependent Indiana Bat (*Myotis sodalist*), Gray Bat (*Myotis grisescens*) and Northern Long-eared Bat (*Myotis septentrionalis*).

For Joanne Benante, Chief, Water Quality Planning Branch — Date 4/21/2016

Appendix A (Dr. Sowers email to the EPA describing all of the listed species and critical habitat found in the areas impacted by the revisions to Georgia's WQS)

Poe, Jason

From: Sowers, Anthony <anthony_sowers@fws.gov>
Sent: Monday, April 04, 2016 2:11 PM
To: Poe, Jason
Subject: Re: Species List for GA Triennial Review_2013

Jason,

I have been looking into the available GIS information for our aquatic and aquatic-dependent species. Particularly for the mussel species, I've been having some difficulties. There is a great deal of ongoing survey effort for mussel occurrence. Much of the preliminary occurrence data is not available to be shared at this point. Its a very fluid process. I wouldn't be comfortable putting together maps at this point, with the high likelihood that they may change significantly over a short period of time. I think this just means we may need to coordinate closely if new criteria are proposed in the future to ensure that the most recent information is being considered.

For the purposes of the triennial review consultation, I believe the occurrence of the fine-lined pocketbook (FLP) in relation to the Buffalo Creek criterion was the most pressing question. I would request that the Little Tallapoosa River, where it meets Buffalo Creek, be considered to be occupied by the FLP.

All other species indicated in my previous email should be considered present where the criteria will be applied.

Please let me know if you have other questions or want to discuss on the phone.

Thanks,

Anthony

On Mon, Apr 4, 2016 at 1:40 PM, Poe, Jason <Poe.Jason@epa.gov> wrote:

Anthony,

Were you able to research and acquire GIS information on these species?

Jason

From: Sowers, Anthony [mailto:anthony_sowers@fws.gov]
Sent: Wednesday, March 09, 2016 10:36 AM
To: Poe, Jason <Poe.Jason@epa.gov>
Subject: Species List for GA Triennial Review_2013

Jason,

In response to your letter dated February 22, 2016 requesting species lists for the 2013 GA Triennial Review Water Quality changes, I have compiled lists for each individual proposed change below.

-Peachtree Creek- No federally listed species present

-Conasauga River- See the attached Conasauga River Trust Resource Report. Within that report, the listed **fish**, **clams**, and **snail** and their associated critical habitats should be considered. These species either occur directly within the proposed ONRW, or downstream.

-Cabin Creek- The following freshwater clams should be considered Gulf Moccasinshell *Medionidus penicillatus,* Oval Pigtoe *Pleurobema pyriforme,* Purple Bankclimber (mussel) *Elliptoideus sloatianus,* Shinyrayed Pocketbook *Lampsilis subangulata*. No critical habitats are present.

-Buffalo Creek- The species indicated in your letter (Indiana bat, gray bat, northern long-eared bat, and fine-lined pocketbook) should be considered.

For future actions, the Service's "Information for Planning and Conservation" website is a useful resource for compiling species lists (https://ecos.fws.gov/ipac/). Also, as we've discussed, I will compile relevant GIS information (where available and suitable for distribution) for listed aquatic and aquatic dependent species in Georgia and provide that to the EPA for future efforts.

Please let me know if you have any questions.

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Anthony Sowers, PhD

Georgia Ecological Services

Coastal Georgia Sub Office

4980 Wildlife Drive, NE

Townsend, Georgia 31331

Office: 912-832-8739 ext.3

Cell: 912-403-1838

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US Fish & Wildlife Service
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Townsend, Georgia 31331
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